

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 Claim 1 (previously presented): A radio receiver
2 comprising:
3 a gain controlling means for controlling a gain of the
4 radio receiver;
5 an electric field intensity detecting means for detecting
6 an electric field intensity of a received signal;
7 an error rate measuring means for measuring an error rate
8 of the received signal;
9 a threshold setting means for setting a threshold of an
10 electric field intensity level based on the measured
11 error rate of the received signal, wherein said
12 threshold setting is varied depending on a
13 transmission condition; and
14 a first controlling means for causing the gain
15 controlling means to start the gain control
16 operation when the electric field intensity detected
17 by the electric field intensity detecting means
18 reaches the threshold of the electric field
19 intensity level.

1 Claim 2 (canceled).

1 Claim 3 (currently amended): A radio receiver for
2 receiving a signal having a signal format that is transmitted
3 while changing transmission conditions into two types or more,
4 comprising:
5 a gain controlling means for controlling a gain of the
6 radio receiver;

7 an electric field intensity detecting means for detecting
8 an electric field intensity of a received signal;
9 a threshold setting means for automatically setting a
10 threshold of an electric field intensity level based
11 on the transmission condition of the received
12 signal, wherein said threshold setting is varied
13 depending on said transmission condition; and
14 a first controlling means for causing the gain
15 controlling means to start the gain control
16 operation when the electric field intensity detected
17 by the electric field intensity detecting means
18 reaches the threshold of the electric field
19 intensity level.

1 Claim 4 (currently amended): A radio receiver for
2 receiving a signal having a signal format that is transmitted
3 while changing transmission conditions into two types or more,
4 comprising:
5 a gain controlling means for controlling a gain of the
6 radio receiver;
7 a gain control amount setting means for setting a gain
8 control amount of the gain controlling means in
9 response to the transmission condition of the
10 received signal;
11 a second controlling means for causing the gain
12 controlling means to change a gain in response to
13 the gain control amount; and
14 a threshold setting means for automatically setting a
15 variable threshold of an electric field intensity
16 level, wherein said threshold setting is varied
17 depending on said transmission condition.

1 Claim 5 (previously presented): A radio receiver
2 according to any one of claims 1, 3 or 4, wherein the gain

3 controlling means is a step-wise gain control type which
4 changes the gain by a predetermined amount when a signal level
5 of the received signal exceeds a predetermined level.

1 Claim 6 (original) A radio receiver according to any one
2 of claims 1 or 3, wherein the gain controlling means is a
3 continuous gain control type which changes the gain in
4 response to a signal level of the received signal.

1 Claim 7 (previously presented) : A radio receiver
2 according to claim 1, wherein the threshold setting means
3 decides a change direction and/or a change amount of the
4 threshold of the electric intensity level in a succeeding
5 reception based on a measured result by the error rate
6 measuring means in a present reception and a measured result
7 by the error rate measuring means in a preceding reception.

1 Claim 8 (original) : A radio receiver according to claim
2 1, wherein the threshold setting means decides a change
3 direction and/or a change amount of the threshold of the
4 electric field intensity level in a succeeding reception based
5 on a measured result by the error rate measuring means in a
6 present reception, a measured result by the error rate
7 measuring means in a preceding reception, the threshold of
8 electric field intensity level set in a present reception, and
9 a set value of the threshold of electric intensity level in
10 the preceding reception.

1 Claim 9 (original) : A radio receiver according to any one
2 of claims 1, 7 or 8, further comprising:
3 a threshold range setting means for setting an available
4 set range of the threshold of electric intensity
5 level, which is defined by a maximum value and a
6 minimum value.

1 Claim 10 (original): A radio receiver according to any
2 one of claims 1, 7 or 8, wherein the threshold setting means
3 does not change a setting of the threshold of electric
4 intensity level when the threshold of electric intensity level
5 is more than the maximum value or is less than the minimum
6 value of the available set range and a measured result by the
7 error rate measuring means is less than a predetermined value.

1 Claim 11 (original): A radio receiver according to any
2 one of claims 7 or 8, further comprising:

3 a storing means for updating/holding the measured result
4 by the error rate measuring means in the present
5 reception as a measured result by the error rate
6 measuring means in the preceding reception,
7 updating/holding the threshold of electric intensity
8 level set in the present reception as the set value
9 of the threshold of electric intensity level in the
10 preceding reception, and updating/holding the
11 threshold of electric intensity level set by the
12 threshold setting means in the present reception as
13 the threshold of electric intensity level set in a
14 succeeding reception.

1 Claim 12 (previously presented): A radio receiver,
2 comprising:

3 a gain controlling means for controlling a gain of the
4 radio receiver;
5 an error rate measuring means for measuring an error rate
6 of the received signal;
7 a gain control amount setting means for setting a gain
8 control amount of the gain controlling means in
9 response to the error rate; and

10 a second controlling means for causing the gain
11 controlling means to change the gain in response to
12 the gain control amount, wherein
13 the gain control amount setting means decides a change
14 direction and/or a change amount of the gain control
15 amount in a succeeding reception based on a measured
16 result by the error rate measuring means in a
17 present reception and a measured result by the error
18 rate measuring means in a preceding reception.

1 Claim 13 (previously presented): A radio receiver,
2 comprising:
3 a gain controlling means for controlling a gain of the
4 radio receiver;
5 an error rate measuring means for measuring an error rate
6 of the received signal;
7 a gain control amount setting means for setting a gain
8 control amount of the gain controlling means in
9 response to the error rate; and
10 a second controlling means for causing the gain
11 controlling means to change the gain in response to
12 the gain control amount, wherein
13 the gain control amount setting means decides a change
14 direction and/or a change amount of the gain control
15 amount in a succeeding reception based on a measured
16 result by the error rate measuring means in a
17 present reception, a measured result by the error
18 rate measuring means in a preceding reception, the
19 gain control amount set in a present reception, and
20 a set value of the gain control amount in the
21 preceding reception.

1 Claim 14 (previously presented): A radio receiver
2 according to any one of claims 12 or 13, further comprising:

3 a gain control amount range setting means for setting an
4 available set range of the gain control amount, which is
5 defined by a maximum value and a minimum value.

1 Claim 15 (previously presented): A radio receiver
2 according to any one of claims 12 or 13, wherein the gain
3 control amount setting means does not change a setting of the
4 gain control amount when the gain control amount is more than
5 a maximum value or is less than a minimum value of the
6 available set range and a measured result by the error rate
7 measuring means is less than a predetermined value.

1 Claim 16 (original): A radio receiver according to any
2 one of claims 12 or 13, further comprising:

3 a storing means for updating/holding the measured result
4 by the error rate measuring means in the present reception as
5 a measured result by the error rate measuring means in the
6 preceding reception, updating/holding the gain control amount
7 set in the present reception as the set value of the gain
8 control amount in the preceding reception, and
9 updating/holding the gain control amount set by the gain
10 control amount setting means in the present reception as the
11 gain control amount set in a succeeding reception.

1 Claim 17 (previously presented): A radio receiving method
2 used for a radio receiver including a gain controlling means
3 for controlling a gain of the radio receiver, an electric
4 field intensity detecting means for detecting an electric
5 field intensity of a received signal, and an error rate
6 measuring means for measuring an error rate of the received
7 signal, comprising:

8 an error rate measuring step of measuring the error rate
9 in the receiving step by the error rate measuring
10 means;

11 a threshold setting step of setting a threshold of
12 electric intensity level based on the measured error
13 rate of the received signal, wherein said threshold
14 setting is varied depending on a transmission
15 condition; and
16 a first controlling step of causing the gain controlling
17 means to start the gain control operation when the
18 electric field intensity detected by the electric
19 field intensity detecting means reaches the
20 threshold of electric intensity level.

1 Claim 18 (previously presented): A radio receiving method
2 according to claim 17, further comprising:

3 a receiving step of performing a reception at the set
4 threshold of the electric intensity level;
5 wherein the threshold setting step decides a change
6 direction and/or a change amount of the threshold of electric
7 intensity level in a succeeding reception based on a measured
8 result by the error rate measuring means in a present
9 reception and a measured result by the error rate measuring
10 means in a preceding reception.

1 Claim 19 (previously presented): A radio receiving method
2 according to claim 17, further comprising:

3 a receiving step of performing a reception at the set
4 threshold of electric intensity level;
5 wherein the threshold setting step decides a change
6 direction and/or a change amount of the threshold of electric
7 intensity level in a succeeding reception based on a measured
8 result by the error rate measuring means in a present
9 reception, a measured result by the error rate measuring means
10 in a preceding reception, the threshold of electric intensity
11 level set in a present reception, and a set value of the
12 threshold of electric intensity level in the preceding

13 reception.

1 Claim 20 (original): A radio receiving method according
2 to any one of claims 17, 18 or 19, further comprising:
3 a threshold range setting step of setting an available
4 set range of the threshold of electric intensity level, which
5 is defined by a maximum value and a minimum value.

1 Claim 21 (previously presented): A radio receiving method
2 according to any one of claims 17, 18 or 19, wherein the
3 threshold setting step does not change a setting of the
4 threshold of electric intensity level when the threshold of
5 electric intensity level is more than a maximum value or is
6 less than a minimum value of the available set range and a
7 measured result by the error rate measuring means is less than
8 a predetermined value.

1 Claim 22 (original): A radio receiving method according
2 to any one of claims 18 or 19, further comprising:
3 a storing step of updating/holding the measured result by
4 the error rate measuring means in the present reception as a
5 measured result by the error rate measuring means in the
6 preceding reception, updating/holding the threshold of
7 electric intensity level set in the present reception as the
8 set value of the threshold of electric intensity level in the
9 preceding reception, and updating/holding the threshold of
10 electric intensity level set by the threshold setting means in
11 the present reception as the threshold of electric intensity
12 level set in a succeeding reception.

1 Claim 23 (canceled).

1 Claim 24 (previously presented): A radio receiving method
2 used for a radio receiver including a gain controlling means

3 for controlling a gain of the radio receiver, and an error
4 rate measuring means for measuring an error rate of the
5 received signal, comprising:

6 a gain control amount setting step of setting a gain
7 control amount of the gain controlling means in
8 response to a measured result of the error rate
9 measuring means;
10 a second controlling step of causing the gain controlling
11 means to change a gain in response to the gain
12 control amount;
13 a receiving step of performing a reception at the set
14 gain control amount; and
15 an error rate measuring step of measuring the error rate
16 in the receiving step by the error rate measuring
17 means; and
18 wherein the gain control amount setting step decides a
19 change direction and/or a change amount of the gain
20 control amount in a succeeding reception based on a
21 measured result by the error rate measuring means in
22 a present reception and a measured result by the
23 error rate measuring means in a preceding reception.

1 Claim 25 (previously presented): A radio receiving method
2 used for a radio receiver including a gain controlling means
3 for controlling a gain of the radio receiver, and an error
4 rate measuring means for measuring an error rate of the
5 received signal, comprising:

6 a gain control amount setting step of setting a gain
7 control amount of the gain controlling means in
8 response to a measured result of the error rate
9 measuring means;
10 a second controlling step of causing the gain controlling
11 means to change a gain in response to the gain
12 control amount;

13 a receiving step of performing a reception at the set
14 gain control amount; and
15 an error rate measuring step of measuring the error rate
16 in the receiving step by the error rate measuring
17 means; and
18 wherein the gain control amount setting step decides a
19 change direction and/or a change amount of the gain
20 control amount in a succeeding reception based on a
21 measured result by the error rate measuring means in
22 a present reception, a measured result by the error
23 rate measuring means in a preceding reception, the
24 gain control amount set in a present reception, and
25 a set value of the gain control amount in the
26 preceding reception.

1 Claim 26 (previously presented): A radio receiving method
2 according to any one of claims 24 or 25, further comprising:
3 a gain control amount range setting step of setting an
4 available set range of the gain control amount, which is
5 defined by a maximum value and a minimum value.

1 Claim 27 (previously presented): A radio receiving method
2 according to any one of claims 24 or 25, wherein the gain
3 control amount setting step does not change a setting of the
4 gain control amount when the gain control amount is more than
5 the maximum value or is less than the minimum value of the
6 available set range and a measured result by the error rate
7 measuring means is less than a predetermined value.

1 Claim 28 (previously presented): A radio receiving method
2 according to any one of claims 24 or 25, further comprising:
3 a storing step of updating/holding the measured result by
4 the error rate measuring means in the present reception as a
5 measured result by the error rate measuring means in the

6 preceding reception, updating/holding the gain control amount
7 set in the present reception as the set value of the gain
8 control amount in the preceding reception, and
9 updating/holding the gain control amount set by the gain
10 control amount setting means in the present reception as the
11 gain control amount set in a succeeding reception.

1 Claim 29 (currently amended): A radio receiving method
2 used for a radio receiver which includes a gain controlling
3 means for controlling a gain of the radio receiver and an
4 electric field intensity detecting means for detecting an
5 electric field intensity of a received signal and also
6 receives a signal having a signal format that is transmitted
7 while changing transmission conditions into two types or more,
8 comprising:

9 a threshold setting step of automatically setting a
10 threshold of an electric intensity level to start a
11 gain control operation of the gain controlling means
12 in response to the transmission condition of the
13 received signal, wherein said threshold setting is
14 varied depending on said transmission condition; and
15 a first controlling step of causing the gain controlling
16 means to start the gain control operation when the
17 electric field intensity detected by the electric
18 field intensity detecting means reaches the
19 threshold of the electric intensity level.

1 Claim 30 (currently amended): A radio receiving method
2 used for a radio receiver which includes a gain controlling
3 means for controlling a gain of the radio receiver and also
4 receives a signal having a signal format that is transmitted
5 while changing transmission conditions into two types or more,
6 comprising:

7 a gain control amount setting step of setting a gain
8 control amount of the gain controlling means in
9 response to the transmission condition of the
10 received signal;
11 a second controlling step of causing the gain controlling
12 means to change a gain in response to the gain
13 control amount; and
14 a threshold setting step for setting a variable threshold
15 of an electric field intensity level, —, wherein
16 said threshold setting is varied depending on said
17 transmission condition.

1 Claim 31 (previously presented): A computer-readable
2 recording medium for storing a program which causes a computer
3 to execute a radio receiving method set forth in any one of
4 claims 17, 18, 19, 24, 25, 29 or 30.